

Assessment of Awareness, Knowledge, Attitudes and Practices Associated with Eye Diseases in the Population of Aljouf and Hail Province of Saudi Arabia

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ABSTRACT

Objective: To assess the awareness, knowledge, attitudes and practices associated with eye diseases in the population of AlJouf and Hail province of Saudi Arabia.

Material and Methods: A total of 763 patients attending the Ministry of Health hospitals with various complaints were incorporated in this study. Data were collected from participants using a structured questionnaire. The questionnaire collected information regarding demographics, awareness, knowledge, attitude and practice regarding eye diseases.

Results: In this study 59.23% of males and 40.76% of females were participated. Majority of the participants (88.99%) were aware of blurring or refractive error, 83.87% were aware of night blindness. Graduates and higher qualified, male subjects and those belonging to higher economic class were much aware about the various eye diseases and exhibited positive attitudes and practices towards eye care. Most of the participants (60.55%) replied that they went for eye examination whenever they had a complaint, 73.65% were not aware that any treatment is available for eye disease and 26.6% replied that they obtained information about eye diseases from relatives/friends/family members.

Conclusion: The results suggested that still there is a need for health education in the population of this region of Saudi Arabia to increase their level of awareness and knowledge of common eye diseases especially in females, lower economy class and illiterates.

KEYWORDS: Awareness, Attitude, Eye diseases, Knowledge, Practice.

INTRODUCTION

Visual impairment is a noteworthy worldwide wellbeing issue and visual deficiency remains a reason of concern for dismalmess in almost all the nations' in spite of the endeavours to control it. It has been evaluated that there were 161 million persons globally with visual impedance, and most of them lived in developing nations, counting Saudi Arabia.^{1,2,3} So the control of visual impairment is a need for these nations. Visual impairment has remained a genuine general wellbeing issue that has a colossal and wide effect in the general public, with genuine financial misfortune.⁴ Visual disability is usually accompanied with challenges in physical capacity, passionate misery and low socialization as it influences all spaces of the personal satisfaction including individual, mental, and social wellbeing.⁵ Epidemiologic aspect of visual impairment is convoluted and envelops a wide assortment of elements

and methodologies and controlling this issue should be particular, in light of information at the community level.⁶ Visual disability is an essential health issue of general population since it not just impedes the nature of the life of the influenced individual additionally confines the vocation decisions and openings for work of the patients, therefore constituting a financial weight on society.^{7,8}

It is, in this way, imperative that the pervasiveness and reasons for the this issue be explored so that health workers might have applicable qualities that can help them in settling on educated choices with respect to counteractive action and administration programs. Studies carried out among wide population are the most appropriate approach for setting up the prevalence and etiological factors for visual impairment, in any case, such strategies are costly and tedious.⁹

Non treated refractive errors, cataracts, age-related macular degeneration (AMD), glaucoma, diabetic retinopathy are some noted etiological factors of visual impairment. Health awareness and aggrandizement is a standout amongst the most effective devices to expand the health education, as a general wellbeing objective, in various settings or regions. These days, expectations for everyday comforts have been enhanced in many groups; however the predominance of avoidable visual impairment persists altogether elevated in numerous nations. To help in managing the visual impedance, timely and effective management aspects are crucial. Because the prevalence of eye disorders remains a matter of concern throughout the globe and most of the eye diseases can be prevented or treatable, perception of the awareness, knowledge, attitude and practices of the people at community level, in concern with ocular disorders is imperative. It is necessary to actualize an instructive campaign to expand the familiarity with individuals about the nature and characteristics of eye ailments and the significance of timely diagnosis and management.

Studies to find the prevalence and causes of visual impairment and blindness have been conducted in past in Saudi Arabia.^{10,11} Al Shaaln et al., carried out a study to determine the prevalence of visual impairment among Saudi adults of AlJouf province and noted that 13.9% of the subjects were reported with visual impairments.¹² Numerous researches for assessing the knowledge,

attitudes and practices associated with eye diseases in the developed world have been carried out but no such information is available for the Saudi Arabia population. Hence this research was carried out to know the awareness, knowledge, attitudes and practices associated with eye diseases among the population of AlJouf and Hail province.

MATERIALS AND METHODS

This cross-sectional study was carried out at Ministry of Health hospitals in AlJouf and Hail region of Saudi Arabia. The study sample comprised of 763 patients, aged 30 years and above reporting to the hospitals with various complaints. Prior permission was obtained from the ethical clearance committee and consent was taken from all the participants. The patients were randomly selected and were requested to fill the self-administered questionnaire which was translated into Arabic. The questions were included to collect the information regarding awareness and knowledge of common eye diseases, practice and prevention of eye problems. The questionnaire contained information regarding age, gender, education qualification, economic status, awareness and knowledge of common eye diseases, practice to prevent of eye diseases. Statistical analysis was carried out using SPSS version 20.00 (SPSS Inc., Chicago, USA), by applying Chi-square and z-proportionality tests and the statistical significance was set at 5% level (p<0.05).

Table 1: Characteristics of the study sample

Variables	n	Percentage	Z- test (P value)	
Gender	Male	452	59.23	0.0001*
	Female	311	40.76	
Age range (Years)	30-50	395	51.76	0.1649
	51 and above	368	48.23	
Economic status	Low	223	29.23	0.0021*
	Medium	298	39.06	
	High	242	31.72	
Education level	Primary	128	16.77	0.0001*
	Secondary	370	48.49	
	Graduate and higher	265	34.73	

*p<0.05 (z-proportionality test)

Table 2: Distribution of participants according to knowledge of eye problems

Disease	No	Percentage
Blurring/ refractive error	679	88.99
Night blindness	640	83.87
Red eye	580	76.01
Cataract	541	70.90
Pterygium	448	58.71
Diabetic Retinopathy	335	43.90
Trachoma	236	30.93
Glaucoma	129	16.90
Age-related macular degeneration glaucoma (AMD)	174	22.80

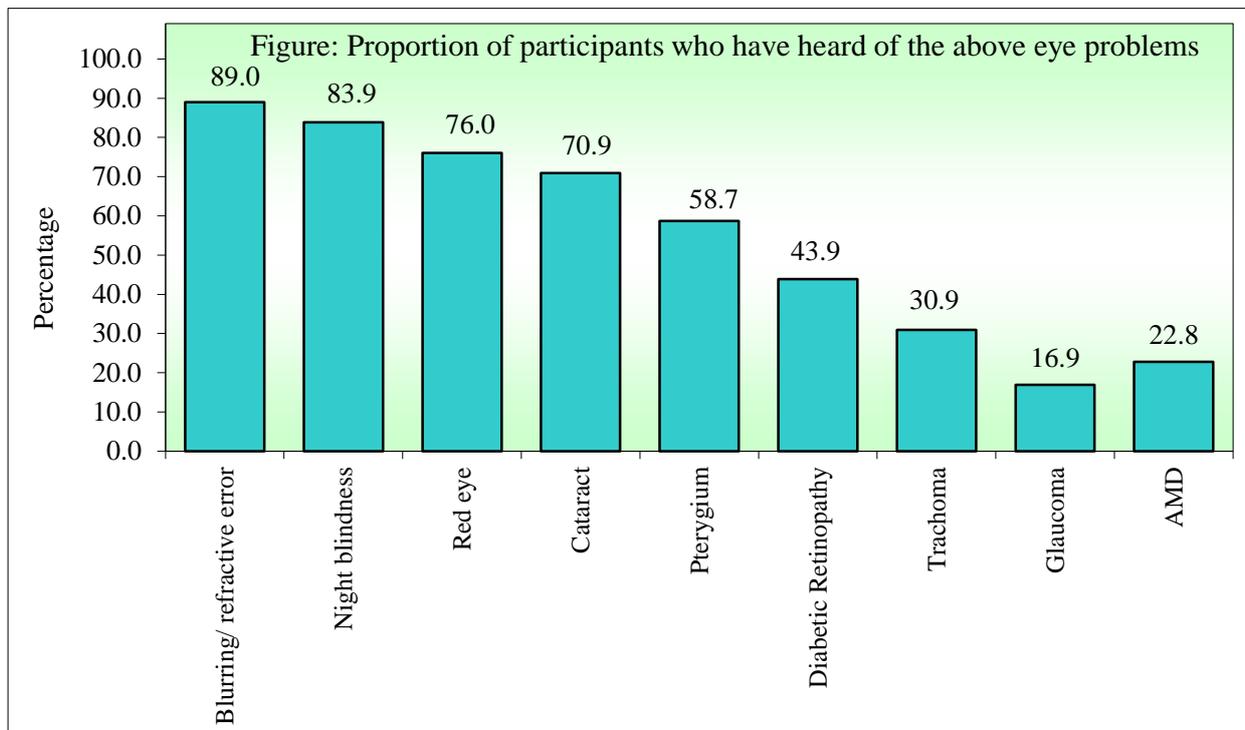


Table 3: Awareness eye disease by gender and age group

Disease	Gender		P	Age group		P
	Male N (%)	Female N (%)		30-50 N (%)	≥ 51 N (%)	
Blurring/ refractive error	549 (71.95)	482 (63.17)	0.0013*	673 (88.20)	468 (61.33)	0.0001*
Night blindness	526 (68.93)	434 (56.88)	0.0001*	656 (85.97)	443 (58.06)	0.0001*
Red eye	506 (66.31)	411 (53.86)	0.0001*	615 (80.60)	396 (49.27)	0.0001*
Cataract	465 (60.94)	371 (48.62)	0.0001*	586 (76.80)	358 (46.92)	0.0001*
Pterygium	358 (46.92)	325 (42.59)	0.1268	568 (74.44)	335 (43.90)	0.0001*
Diabetic Retinopathy	328 (42.98)	301 (39.44)	0.1838	548 (71.82)	297 (38.92)	0.0001*
Trachoma	297 (38.92)	271 (35.51)	0.2006	526 (68.93)	274 (35.94)	0.0001*
Glaucoma	359 (47.05)	160 (20.96)	0.0001*	503 (65.92)	259 (33.94)	0.0001*
AMD	221 (28.96)	129 (16.90)	0.0057*	488 (63.95)	236 (30.93)	0.0001*

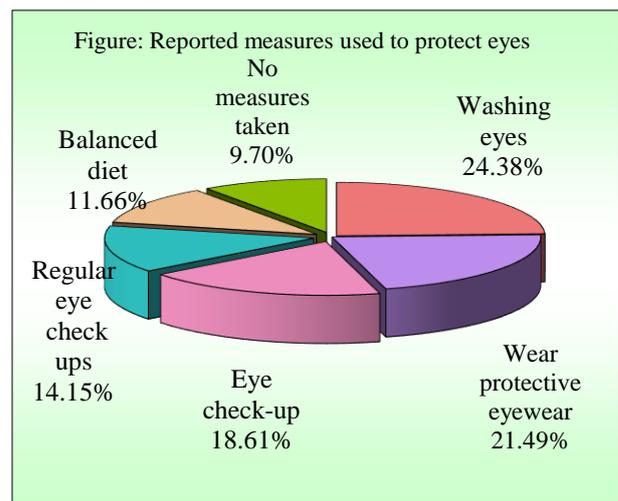
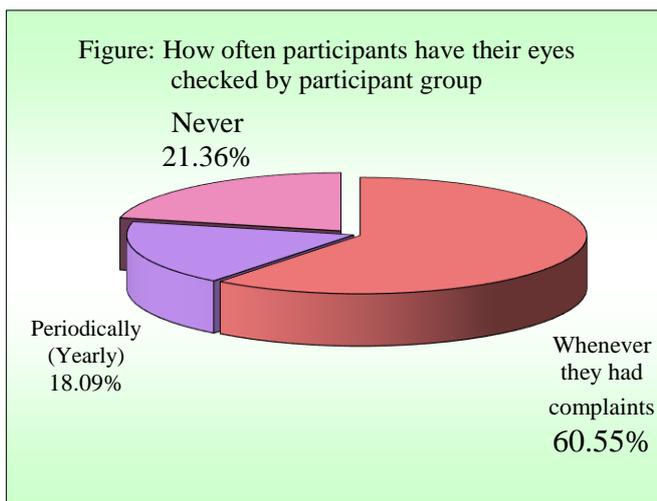


Table 4: Awareness eye disease by education level and economic status

Disease	Education level			P	Economic status			P
	Pr N (%)	S N (%)	G N (%)		L N (%)	M N (%)	H N (%)	
Blurring/ refractive error	442 (57.92)	556 (72.87)	595 (77.98)	0.0001*	389 (50.58)	602 (78.89)	663 (86.89)	0.0001*
Night blindness	396 (51.90)	526 (68.93)	572 (74.96)	0.0001*	366 (47.96)	595 (77.98)	640 (83.87)	0.0001*
Red eye	373 (48.88)	511 (66.97)	542 (71.03)	0.0001*	320 (41.93)	542 (71.03)	601 (78.76)	0.0001*
Cataract	343 (44.95)	465 (60.94)	511 (66.97)	0.0001*	289 (37.87)	526 (68.93)	564 (73.91)	0.0001*
Pterygium	312 (40.89)	450 (58.97)	488 (63.95)	0.0001*	236 (30.93)	495 (64.87)	534 (69.98)	0.0001*
Diabetic Retinopathy	289 (37.87)	419 (54.91)	457 (59.89)	0.0001*	221 (28.96)	464 (60.81)	518 (67.88)	0.0001*
Trachoma	244 (31.97)	389 (50.98)	412 (53.99)	0.0001*	166 (21.75)	424 (55.74)	488 (63.95)	0.0001*
Glaucoma	198 (25.95)	335 (43.90)	373 (48.80)	0.0001*	137 (17.95)	383 (50.19)	465 (60.94)	0.0001*
AMD	160 (20.96)	312 (40.89)	350 (45.87)	0.0001*	122 (15.98)	373 (48.88)	442 (57.92)	0.0001*

*p<0.05, AMD:- Age Related Macular Degeneration; Pr:-Primary level; S:-Secondary level; G:- Graduate and above; H:-High income group; M:- Middle income group; L:-Low income group

RESULTS

Out of 763 samples, 59.23% were males and 40.76% were females, 51.76% belonged to 30-50 age group, 48.23% were of 51 and above years of age. Further, 39.06% of samples belonged to middle economic status and 31.2% belonged to high economic groups, 48.49% of samples gone through secondary school education and 34.73% of samples were graduated or qualified higher (Table 1). Table 2 represents the distribution of participants according to awareness and knowledge of eye diseases. Out of a total 763 samples, a maximum of 88.99% of samples were aware of blurred vision or refractive error and a minimum of 16.90% samples had knowledge about glaucoma, followed by 83.87% about night blindness, 76.01% about red eye, 70.90% about cataract, 58.71% about pterygium, 43.90% about diabetic retinopathy. The awareness of eye diseases by gender and age group are shown in table 3. Out of a total of 763 samples, males had significant higher percentage of awareness regarding blurring/ refractive error, night blindness, red eye, cataract, pterygium, trachoma, glaucoma and AMD (p<0.05) as compared to females except diabetic retinopathy which was not found to be significant (p>0.05). Similarly, the sample in the age group of 30 - 50 years of age had significant higher proportion of awareness regarding all eye diseases compared to samples aged 51 years and above (p<0.05). Table 4 represents the awareness of eye diseases by education level and economic status. Out of 763 samples, the individuals who were graduated and having higher qualification had significant knowledge about eye diseases as compared to samples belonging to secondary

and primary education group (p<0.05). However, the individual belonging to high economic status had significant higher proportion of knowledge in comparison to samples belonging to low and medium economic groups (p<0.05).

Table 5: Eyes checked by participant group

Eye check up	n	Percentage
Whenever they had complaints	462	60.55
Periodically (Yearly)	138	18.08
Never	163	21.36

Table 6: Measures undertaken for eye protection

Measures	n	Percentage
Washing eyes	186	24.37
Wear protective eyewear	164	21.49
Eye check-up	142	18.61
Minimal use of TV and computers	108	14.51
Balanced diet	89	11.66
No measures taken	74	9.69

Table 7: Sources of information

Source of information	n	Percentage
Relatives/friends/family members	203	26.60
Newspapers	131	17.16
Referral health centres	120	15.72
Internet and other multimedia	92	12.05
Rural health workers	83	10.87
Posters and Leaflets	71	9.30
Other	63	8.25

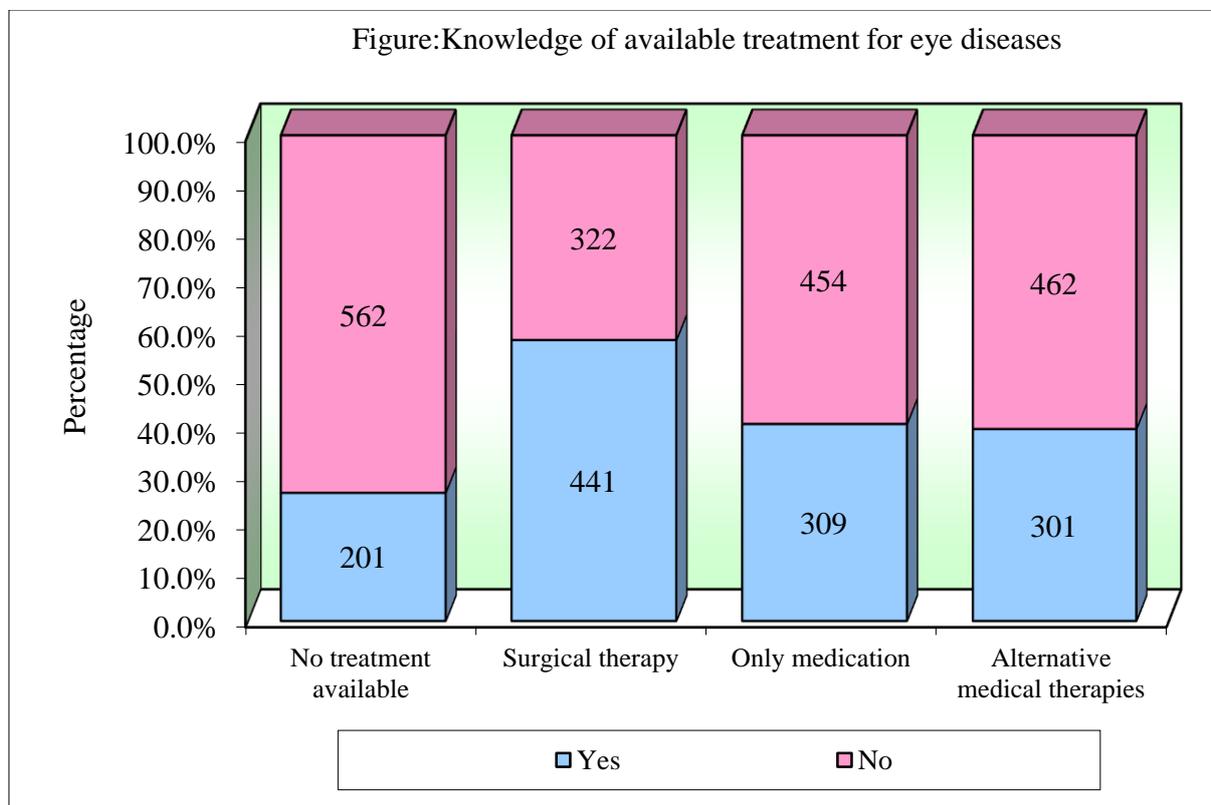
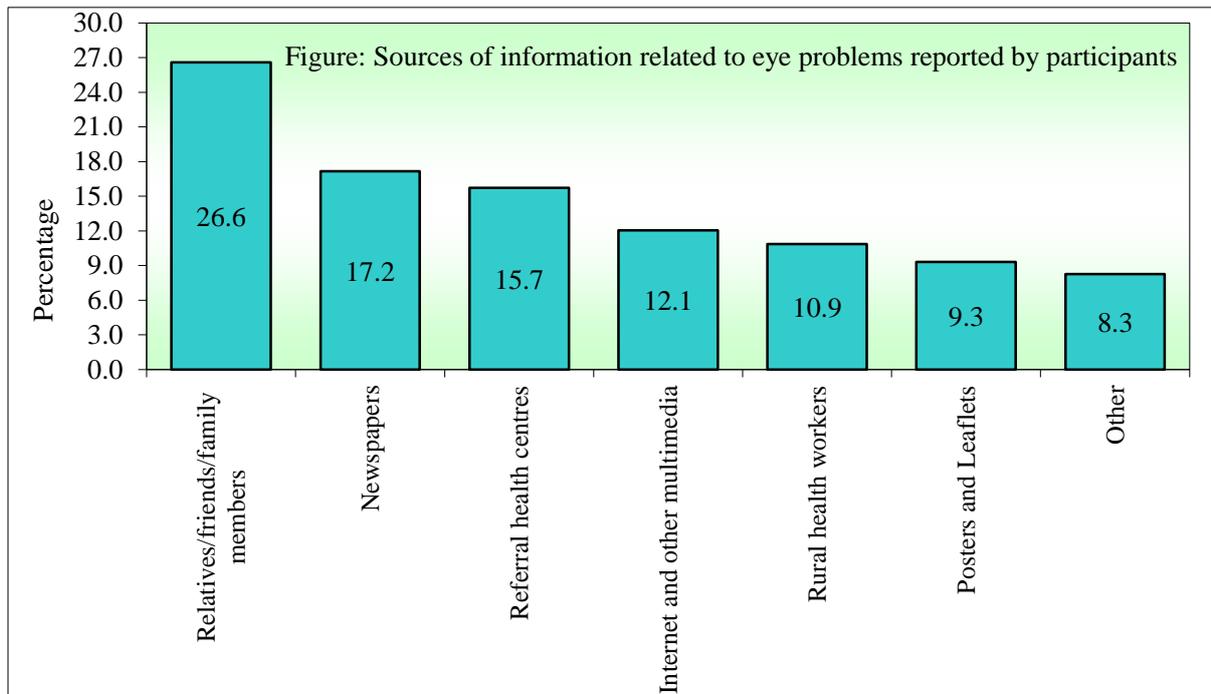


Table 5 represents how often participants had their eyes checked, a maximum of 60.55% of samples had the habit of getting their eyes examined whenever they had complaints, as compared to 18.08% of samples having habit of getting their eyes examined yearly and 21.36% of samples who never got eyes checked.

Table 6 represents the reported measures undertaken for eye protection. Out of 763 samples, a maximum of 24.37% of samples had habit of washing eyes as compared to 21.49% of samples having habit of wearing

protective eyewear. The sources of information related to eye problems reported by participants are represented in table 7. Out of a total 763 samples, a maximum of 26.60% of samples obtained the information through relatives/friends/family members, and minimum of 9.30% and 8.25% of samples got the information through posters, leaflets.

Table 8 represents the knowledge of available treatment for eye diseases, 26.34% of samples replied that no treatment is available, 57.79% were aware that surgical

therapy is enough, 40.49% of sample had knowledge that only medication can treat eye diseases and 39.44% of samples answered that alternative medical therapies are good option for treating eye diseases. A statistical significant difference was observed between their knowledge of available treatment for eye diseases (Chi-square=157.5731 P = 0.0001).

Table 8: Available treatment for eye diseases

Treatment Options	Yes	No
No treatment available	201 (26.34)	562 (73.65)
Surgical therapy	441 (57.79)	322 (42.20)
Only medication	309 (40.49)	454 (59.50)
Alternative medical therapies	301 (39.44)	462 (60.55)
Chi-square=157.5731 P = 0.0001*		

*p<0.05

DISCUSSION

Consciousness of various ocular diseases and their management can assume an essential part in urging individuals to look for prompt eye care and can in this way help in lessening the hardship of visual impedance. A developing collection of proof from studies regarding knowledge, attitudes and practice have backed the requirement for more prominent consciousness of forestalling, analysis, investigation and management of eye diseases.¹³

To the best of our knowledge, this is the first population-based data on awareness of eye diseases in Saudi Arabian population. The main finding of this study was that the overall awareness of common eye diseases in population of AlJouf and Hail region of Saudi Arabia was reasonable.

The subjects between 30 and 50 years age was selected to get a comprehension of conduct towards eye care from a more youthful age gathering's viewpoint or more 51 years was chosen since this is the duration where vision loss is generally predominant. Financially the young individuals are most imperative, since having an ocular inability could mean not having the capacity to add to the family job which could deleteriously affect the entire members.

In this study the individuals between the age group of 30 and 50 were significantly more aware of all the eye diseases, this observation was similar to Islam et al.¹⁴ and Dandona et al.¹⁵ whereas Katibeh et al.¹⁶ observed no correlation between age group and knowledge of ocular disorders. Islam et al., reported from a study conducted in Bangladesh that most of their subjects were aware of cataracts (90%) but in the present study 70.9 % Of individuals were aware of cataracts. In the present study 16.90 participants were aware about glaucoma which was high when compared with results of Islam et al., who observed awareness of glaucoma among 7% of their population.¹⁴ Dandona et al. observed a reasonable

awareness but poor knowledge of cataract and poor awareness of glaucoma in their study.¹⁵ Attebo K et al. and Livingston PM et al. also reported a reasonable level of awareness and poor knowledge of glaucoma among Australian population.^{17,18} In the present study, the knowledge and awareness regarding nyctalopia was reasonable, similar to this observation Dandona et al. noted that awareness of night blindness was reasonable in their study but poor knowledge about night blindness.¹⁵ Awareness regarding the possibility of eye diseases secondary to diabetes mellitus was noted among 43.9% of subjects whereas Islam¹⁴ et al. reported that only 4% had heard of diabetic retinopathy in their study. Dandona et al. confirmed that diabetes causing impaired vision was low in their study sample.¹⁵

In the present study males were having significantly higher proportion of the knowledge regarding ocular diseases. In contrast to this, Katibeh et al. observed that female subjects reported with higher knowledge regarding glaucoma, cataract and diabetic retinopathy.¹⁶ Shrestha et al. observed the awareness of cataract among 49.6%, night blindness was 48.3%, diabetic retinopathy among 29%, glaucoma in 21.3% and trachoma in 6.1% of Nepal population.¹⁹

In the present study 58.71% of subjects were aware of pterygium and 30.93 % were heard of trachoma respectively. In contrast to this, Islam et al. observed a high level of awareness regarding trachoma (86%) and pterygium (84%) in their study.¹⁴

In this study 60.55% of participants replied that they went for eye examination whenever they had a complaint but Islam et al. noted in their study that majority of the samples who reported an ocular problem did not went for eye check-up. They also observed that 1.6% of subjects went for eye examination yearly but in the present study 18.08% of individuals went for yearly eye examination which was comparatively very high.

Similar to the study conducted in India and Bangladesh, education level and economic status also have a significant association with the awareness of eye diseases. Individuals who were graduate and those belonging to upper economic class were much aware about the various eye diseases and exhibited positive attitudes and practices towards eye care; this may be attributed to the fact of better knowledge and accessibility to medical and diagnostic care.¹⁴ This firmly proposes expanding health awareness with respect to ocular diseases is required at all financial levels to enhance participation and health care pursuing practices. In present study, majority of the participants replied that they obtained information about eye diseases from relatives/friends/family members. Katibeh et al. reported that the main source of information was family and friends followed by the media in their study.¹⁶

It is extremely important to minimize the accountability of ocular diseases by employing public health policies

by recognizing the risk components of visual impedances. A main consideration hampering public health schemes is an absence of consciousness of eye disorders which has been appeared to be connected with under privileged results as far as aversion, care of eyes and management.

CONCLUSION

From the observations of the present study it can be concluded that there is a requirement for health education in the study population, especially for those belonging to low income and not well educated, in order to increase their level of awareness and knowledge about common ocular diseases. Expanding the mindfulness and information of basic eye ailments could prompt an expansion in comprehension and acknowledgment of the significance of routine eye examination for timely diagnosis and management of the disease, subsequently diminishing visual weakness and expense of eye care. This information could create compelling health education and data projects to decrease visual disability among the study population.

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